

KUSHNER, Kh.F.

Scientific conference on heterosis. Izv. AN SSSR. Ser. biol. 26
no.1:163-169 Ja-F '61. (MIRA 14:3)
(HETEROSIS--CONGRESSES)

KUSHNER, Kh.F.

Some genetic prerequisites of increased productivity in animals.
Izv. AN SSSR. Ser. biol. 26 no.5:785-797 S-O '61. (MIRA 14:9)

1. Institute of Genetics, Academy of Sciences of the U.S.S.R.,
Moscow.

(STOCK AND STOCKBREEDING)

KUSHNER, Kh.F.; NOVIK, I.Ye. (Moskva)

Transplantation of ova and embryos in mammals and birds. Usp. sovr.
biol. 51 no. 2 232-249 Mr-Apr '61. (MIRA 14:4)
(OVUM IMPLANTATION)

BOGATYREVA, S.A.; ZNAMENSKAYA, M.P.; KUSHNER, Kh.F.; MOISEYEVA, I.G.;
TOLOKONNIKOVA, Ye.V.

Introduction of foreign desoxyribonucleic acid into the organism of
a hen. Dokl.AN SSSR 136 no.5:1213-1215 F '61. (MIRA 14:5)

1. Institut biokhimii im. A.N.Bakha AN SSSR i Institut genetiki
AN SSSR. Predstavleno akad. N.M.Sisakyanom.
(Desoxyribonucleic acid) (Poultry)

KUSHNER, KH. F.; KOSTIN, L. G.; DOBRYNINA, A. YA;
ZUBAREVA, L. A.; SALGANIK, M. G.; SAMOLETOV, A. I.

"The Use of Small Doses fo Gamma-Radiation for the
Improvement of Some Commercial Qualities of Hens"

Report Submitted for the Twelfth World's Poultry
Congress, Sydney, Australia 10-18 Aug 1962

KUSHNER, Kh.F., doktor biologicheskikh nauk, prof.; NOVIK, I.Ye.

Experiments the transplantation of egg cells and embryos in animals.
Biol. v shkole no.1:70-77 Ja-F '62. (MIA 15:1)

1. Institut genetiki AN SSSR.
(EMBRYOLOGY) (TRANSPLANTATION OF ORGANS, TISSUES, ETC.)

KUSHNER, Kh.F., doktor biologicheskikh nauk, prof.

Heredity of organisms and the environment. Biol. v shkole no.3:61-67
My-Je '62. (MIRA 15:7)

1. Institut genetiki Akademii nauk SSSR.
(Heredity)

KUSHNER, Kh.F., doktor biologicheskikh nauk

Problem of telegony. Nauka i zhizn' 29 no.12:66
D '62. (MIRA 16:3)

1. Zamestitel' direktora Instituta genetiki AN SSSR.
(Telegony)

KUSHNER, Kh.F.; NOVIK, I.Ye.

Using the seminal fluid to dilute the sperm of cocks. Zhur.ob.
biol. 23 no.4:320 J1-Ag '62. (MIRA 15:9)

1. Institut genetiki AN SSSR.
(SEMEN)

KUSHNER, Kh.F.; KOPYLOVSKAYA, G.Ya.; NOVIK, I.Ye.; SOLONINA, M.L.

Artificial fertilization of hens and turkeys. Trudy Inst. gen.
no.29:305-331 '62. (MIRA 16:7)

(Artificial insemination)
(Poultry breeding)

KUSHNER, K. H. F., KOSTIN, I. G., ZUBAREVA, L. A., SHERSHUNOVA, L. I.,
KUZNETSOV, N. I., and SALGANIK, M. G.,

"The Effect of Microdose Irradiation of Hen's Eggs upon Hatchability and other
Characters of Chickens."

report submitted for the 11th Intl. Congress of Genetics, The Hague, Netherland,
2-10 Sep 63

KUSHNER, Kh.F.; KOPYLOVSKAYA, G.Ye.; SEREBRYAKOV, A.S.;
GORODKOVA, H.Ye.; AFONINA, A.V.

Effectiveness of reciprocal recurrent selection in poultry
raising. Trudy Inst. gen. no.29:282-289 '62. (MIRA 16:7)

(Poultry breeding)

KUSHNER, Kh. F., otv. red.; GLUSHCHENKO, I. Ye., red.; YENIKEYEV,
Kh. K., red.; KOSIKOV, K. V., red.; NUZHIDIN, N. I., red.;
PASHINSKAYA, T. N., red.; POLYAKOV, I. M., red.; PREZENT,
I. I., red.; SUKHOV, K. S., red.; FEYGISON, N. I., red. izd-
va; UL'YANOVA, O. G., tekhn. red.

[Genetics in agriculture] Genetika - sel'skomu khoziaistvu.
Moskva, Izd-vo AN SSSR, 1963. 794 p. (MIRA 16:9)

1. Akademiya nauk SSSR. Institut genetiki.
(Plant breeding) (Stock and stockbreeding)

KUSHNER, K.F.; KOPYLOVSKAYA, G.Ya.; NOVIK, I.Ye.

Efficient evaluation of breeding roosters based on offspring. Trudy
Inst. gen. no.30:237-246 '63. (MIRA 17:1)

NOVIK, I.Ye.; KUSHNER, Kh.F., doktor biol. nauk, otv. red.;
KOLPAKOVA, Ye.A., red.

[Biology of the multiplication and artificial insemination of poultry] Biologiya razmnozheniia i iskusstvennoe osemenenie sel'skokhoziaistvennoi ptitsy. Moskva, Izd-vo "Nauka," 1964. 140 p. (MIRA 17:4)

KUSHNER, Kh. F.; NOVIK, L. Ye.

"Fertilization and artificial insemination in poultry."

report submitted to 5th Intl Cong, Animal Reproduction & Artificial Insemination,
Trent, Italy, 6-13 Sep 64.

POLYAKOV, I.M.; KUSHNER, Kh.F., doktor biolog.nauk

International Genetic Congress at The Hague. Vest. AN SSSR 34
no.3:105-112 Mr '64. (MIRA 17:4)

1. Chlen-korrespondent AN UkrSSR (for Polyakov).

KUSHNER, Kh.F.

Heritability and repeatability of animal characters, methods of
their determination and their significance in breeding work. Trudy
Inst. gen. no.31:24-54 '64. (MIRA 17:9)

KUSHNER, Kh.F.; ZUBAREVA, L.A.

Some results of inbreeding in poultry breeding. Trudy Inst. gen.
no.31:255-275 '64. (MIRA 17:9)

KUSHNER, Kh.F.; NOVIK, I.Ye.; GINTOVI, V.Ye.

Experimental study on various diluters of chicken somen. Trudy
Inst. gen. no.31:276-281 '64. (MIRA 17:9)

KUSHNER, KH.F.

Current problems of animal genetics. Trudy Inst. gen.
no.33:3-22 '65. (MIRA 18:12)

LUNKEVICH, Valerian Viktorovich (1866-1941), doktor biol. nauk,
prof.; KUSHNER, Kh.F., prof., otv. red.

[Popular biology] Zanimatel'naia biologiya. Moskva, Nauka,
1965. 272 p. (MIRA 18:10)

ZUBAREVA, L.A.; KUZNETSOV, N.I.; KUSHNER, Kh.F., prof., rukovoditel'
raboty

Gamma irradiation of hen's eggs with doses of 2,9-7,65 r
and its effect on gas and energy metabolism in embryos.
Trudy Inst. gen. no.33:155-163 '65. (MIRA 18:12)

YUSHKOV, V., inzh.; KUSHNER, M., inzh.; MAL'KOV, Yu., inzh.

Pulse selector. Radio no. 7154 J1 '65.

(MIRA 18:9)

KUSHNER, M., inzh. (Moskva); YUSHKOV, V., inzh. (Moskva)

High-speed multichannel commutator. Radio no.4:49-50 Ap '65.
(MIRA 18:5)

KUSHNER, M.V.

USSR/Chemical Technology - Chemical Products and Their
Application. Wood Chemistry products. Hydrolysis
Industry.

I-9

Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2658

Author : Kushner, M.V.

Inst : Arkhangel'sk Institute of Wood Technology

Title : Carburizing Agent from Tar and Coal

Orig Pub : Tr. Arkhang. lesotekhn. in-ta, 1957, 17, 186-192

Abstract : The carburizing agent was produced in accordance with the following technological scheme: comminution of coal, preparation of mixture of tar, coal and water (ratio of coal and tar 1.2:1 and 1:1), forming the mixture into tablets by means of a screw-conveyer extrusion machine, thermal treatment of the moist carburizing agent at 400-450°. The yield of the carburizing agent is of about 70% of the

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USSR/Chemical Technology - Chemical Products and Their
Application. Wood Chemistry products. Hydrolysis Industry

I-9

weight of dry coal and tar produced tar and coal is of about 66.5% of the concurrently weight of gas is of about 15% of the total amount of tar and coal in the initial mixture. The thus produced carburizing agent has good cementation properties.

APPROVED FOR RELEASE: 03/13/2001

CIA-RDP86-00513R00092782001

Card 2/2

KOSYGIN, A.; NOVIKOV, V.; MURAV'YEVA, N.; ZOTOV, V.; AKIMOV, I.;
SPORYSHEV, V.; KOLOSOVA, V.; CHESNOKOV, N.; NEFEDOVA, O.;
BOGAYEVA, A.; PIKOVSKIY, G.; KARMANOV, M.; SIYTAM, Ye.;
KHODAKOVA, S.; KUSHNER, P.; BLYAKHMAN, I.; BASSIAS, L.;
KINSEHMETSEVA, A.; PRZNIKOV, M.; KALININ, A.

KUSHNER, Pavel Ivanovich (Knyshev)

KUSHNER, Pavel Ivanovich (Knyshev). ...Gornaia Kirgiziia. Vyp. II. (Sotsiologicheskaiia razvedka). Moskva, 1929. 132 p. (Trudy nauchn.-issled. assotsiatsii pri Kommunistich. universitete trudiashchikhsia Vostoka im. Stalina.).
DLC: Unclass.

CSt-H NN

SO: LC, Soviet Geography, Part II, 1951, Unclassified

KUSHNER, P. I. (KNYSHEV).

21286 KUSHNER, P. I. (KNYSHEV). Zinicheskaya granitsa. (Opyt obobshchkh
kharakteristiki tipov zinich granits i neko otrykh evrop stranakh). Trudy
vtorogo vsesoyuz geogr s"ezda. T. Sh M., 1949, S. 296-99.

SO: Ietopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

KUSHNER, P. I.

Ethnology - Baltic States

Ethnic territories and ethnic boundaries. Trudy Inst. etn. AN SSSR 15, 1951.

9. Monthly List of Russian Accessions, Library of Congress, April 195~~7~~, Uncl.
2

KUSHNER, F. I.

Ethnology

Ethnographic study of the collective farm
peasantry. Sov. ethn. No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

KUSHNER, P.

"Ethnographic Study of the Present-Day Mode of Living in Villages in the USSR"

Tr. from the Russian . P. 245

(CESKY LID, Vol. 40, NO. 6, Dec. 1953, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4,
Apr. 1955, Uncl.

KUSHNER, S.A., inzhener; SHEVCHUK, I.A.

Finishing nonveneered furniture with water-soluble stains. Der.
prom. 5 no.2:18-19 F '56. (MLRA 9:5)

1. Derevoobdelochnyy zavod No. 1 tresta Mosgornebel'prom.
(Stains and staining) (Furniture industry)

KUSHNER, S.A.

~~Vera Aleksandrovna Shigorina.~~ Med.sestra no.10:27 0 '55.
(MLRA 8:12)

1. Glavnyy vrach Detskoy bol'nitsy no.6, Moscow.
(SHIGORINA, VERA ALEKSANDROVNA)

KUSHNER, S.A.

Problems in the technic of surgery in acute appendicitis in the
light of clinical and histological parallels. Khirurgiia 37
no.2:83-87 F '61. (MIRA 14:1)

1. Iz kliniki gospiatal'noy khirurgii (zav. - zasluzhennyy deyatel'
nauki Latvyskoy SSR prof. A.F. Lepukaln) Rzhskogo meditsinskogo
instituta na baze 1-y Rzhskoy gorodskoy klinicheskoy bol'nitsy
(glavnyy vrach K.F. Bergman).
(APPENDECTOMY)

KUSHNER, S.G., inzh.; SISTER, G.A., kand. tekhn. nauk; SVYATUKHIN, V.V., inzh.

Designing nitrogen fertilizer plants for processing coke gas.
Prom. stroi. 42 no.12:30-34 D '64. (MIRA 18:3)

1. Dneprodzerzhinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektного instituta azotnoy promyshlennosti i produktov organicheskogo sinteza.

FEDOROV, V.D.; KUSHNER, S.G.; TELITCHENKO, M.M.

Interrelations between algae and micro-organisms. Part 1. Effect of developing cultures of the protococcal algae *Chlorella vulgaris* and *Scenedesmus obliquus* on the survival of *Escherichia coli*. Nauch. dokl. vys. shkoly; biol. nauki no.2:160-165 '62.

(MIRA 15:5)

1. Rekomendovana kafedroy gidrobiologii Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova.

(*ESCHERICHIA COLI*) (*ALGAE*)

KROHN, C. L.

Calculating the sagging of foundations taking into account the effect of a neighboring foundation; corrections to the example given in the "Aids for designing the foundations of buildings and structures," Osn., fund. i mekh. gran. 7 no.4:26-27 '65.
(MIRA 18:8)

LAZARENKO, A.Y., Koral. tekhn. nauk; GUY, Yu.Ye., Inzh.; BLOK, G. Ye.,
Inzh.; KOSHEER, G.P., Inzh.; IVACHEN, K.V., Inzh.

Recording steady exfoliation before argon arc welding of the
AMg and AMg₂ alloys. Svar. profil. no. 6406-87. 16 tel.
(MIRA 1842)

ACCESSION NR: AP4040705

S/0135/64/000/006/0036/0037

AUTHOR: Litvintsev, A. I. (Candidate of technical sciences);
Guk, Yu. P. (Engineer); Baryshev, S. Ye. (Engineer); Kushner, S. R.
(Engineer); Ivashko, K. V. (Engineer)

TITLE: Revealing of line laminations before argon arc welding of
AMg5 and AMg6 alloys

SOURCE: Svarochnoye proizvodstvo, no. 6 (630), 1964, 36-37

TOPIC TAGS: aluminum alloy, AMg5 alloy, AMg6 alloy, alloy welding,
alloy sheet welding, argon arc welding, aluminum alloy sheet defect,

ABSTRACT: Laminations are one of the defects encountered in AMg5
and AMg6 aluminum-alloy sheets and plates. These laminations are
small nonmetallic particles mixed with metal. The laminations origi-
nate from slag inclusions crushed during rolling and elongated in
the direction of the rolling. The laminations promote the formation
of blow holes and porosity in welds. X-ray inspection has shown that
95% of the porosity is associated with laminations. The individual

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ACCESSION NR: AP4040705

pores in sheets 3—5 mm thick can be as much as 2—3 mm in diameter. The most effective way of detecting laminations in aluminum-alloy sheets is the ultrasonic echo method with stimulation of waves normal to the sheet surface. The method detects defects 1 mm wide and 30 mm long at a distance of 300—400 mm from the point where ultrasonic vibrations are applied. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

ATD PRESS: 3070

ENCL: 00

SUB CODE: MM

NO REF SOV: 000

OTHER: 000

Card 2/2

Kushnir, S. V.

5

✓ Reduction of magnesium sulfate by natural gas. Ya. P. Berkman and S. V. Kushnir (Polytech. Inst. 2
Dolodny Akad. Nauk S.S.S.R. 1964, 113-115, 1166-1167).
The primary reaction of $MgSO_4$ with natural gas probably is
 $4MgSO_4 + CH_4 = 4MgO + 4SO_2 + CO_2 + 2H_2O$. This
agrees with the free-energy changes $\Delta F_{298}^\circ = -160.13$, $\Delta F_{700}^\circ =$
 -95.16 . The conversion to MgO is virtually complete
between 750 and 850°. By controlling the temp. and veloci-
ty of the gas current, it is possible to obtain as principal
product either SO_2 or products of further reduction: S , CS_2 ,
and H_2S .
W. M. Strohriess

SERAFIMOV, L.A.; KUSHNER, T.M.; L'VOV, S.V.

Liquid - vapor phase equilibrium in the system acetic acid-propionic acid at atmospheric pressure. Zhur.fiz.khim. 36 no.8:1830-1832 Ag '62. (MIRA 15:8)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Acetic acid) (Propionic acid) (Phase rule and equilibrium)

KUSHNER, V., machinist.

School of skill. Mast.ugl. 2 no.023 4; '53.

(Klata 6:8)

1. Kombayn "Donbas" shakhty "Polyayevskaya-2" kombinata Kuzbassugol'.
(Coal mines and mining)

KUSHNER, V. M.

Method of Measuring The Traveling Wave Ratio in Feeders and Wave
Guides. Patent, Class 21a⁴. 71. No 103179. Elektrosvyaz' No 1, Jan 57.

Kushner V. P.

U.S.R.

✓ Study of the mechanism of vulcanization of rubber with the aid of sulfur-35. III. S. E. Bresler, V. P. Kushner, and E. M. Soritski. *Zhur. Tekh. Fiz.* 24, 2159-68 (1954); cf. *ibid.* 577. — In various synthetic rubbers, and especially natural rubber, a nonlinear addn. of S^{35} was observed at concns. 2-15% and at elevated temps. (120-155°). The primary addn. of S was found to be partially followed by the secondary reaction of S -forming polysulfide bridges between the rubber chains. The departure from simple kinetic characteristics of the process is explained on the basis of calcs. of the diffusion coeff. and the amt. of polysulfides in the rubber. Similar measurements were also carried out for rubber vulcanized under the usual conditions (1-2% S ; 130-140°). The free radical S_2^{--} reacts with rubber, even at room temp. The app. is described in detail. A. P. K.

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(2)

KUMMER, V. P., BRUSILIN, S. E., and SAMITSKIY, A. M.

"Free radicals in chemical reaction," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Polymer Research Inst.

B-3,004,395

BRESLER, S.Ye.; KUSHNER, V.P.; FRENKEL', S.Ya.

Structure of globular proteins and their interaction with the
external environment. Biokhimiia 24 no.4:685-696 J1-Ag
'59. (MIRA 12:11)

1. Institut vysokomolekulyarnykh soyedineniy Akademii nauk SSSR,
Leningrad.

(PROTEINS)

KUSHNER, V. P., FRENKEL, S. Ya., (USSR)

"Structural Changes Caused by Reversible
Thermal Inactivation of Trypsin."

Report presented at the 5th Int'l. Biochemistry
Congress, Moscow, 10-16 Aug. 1961.

~~KUSHNETS, V.P.~~

Conformation of the polypeptide chain in globular proteins and
the role of the β -folded structure. Biokhimiia 26 no.6:
1077-1081 N-D '61. (MIRA 15:6)

1. Institute of Cytology, Academy of Sciences of the U.S.S.R.,
Leningrad.

(PROTEINS)

(PEPTIDES)

KUSHNER, V.P.; FRENKEL', S.Ya.

Structural transformations during reversible inactivation of trypsin. Dokl. AN SSSR 141 no.2:481-484 N '61. (MIRA 14:11)

1. Institut tsitologii AN SSSR i Institut vysokomolekulyarnykh soyedineniy AN SSSR. Predstavleno akademikom V.A.Engel'gardtom.
(TRIPSEN)

KUSHNER, V.P.; FRENKEL', S.Ya.

Macromolecular configuration of single chain globular proteins in
spiraling solvents. Biokhimiya 27 no.6:1111-1115 N-D '62.
(MIRA 17:5)

1. Institut tsitologii i Institut vysokomolekulyarnykh soyedineniy
AN SSSR, Leningrad.

KUSHNER, V. P.

Dissertation defended for the degree of Candidate of Biological Sciences at the Institute of High-Molecular Compounds in 1962:

"Several Optical and Hydrodynamic Properties of Globular Proteins in Relation to Their Structure and Function."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

KUSHNER, V. P.

"Study of the Structure of Proteins by Means of Intraglobular Reactions."
pp. 43

Institute of Cytology AS USSR Laboratory of Cytology of Malignant Growth

II Nauchnaya Konferentsiya Instituta Tsitologii AN SSSR. Tezisy Dokladov
(Second Scientific Conference of the Institute of Cytology of the Academy
of Sciences USSR, Abstracts of Reports), Leningrad, 1962 88 pp.

JPRS 20,634

KUSHNER, V.P.

Use of radioactive mercury for investigating free radicals in solution. Kin. i kat. 4 no.4:517-525 JI-Ag '63. (MIRA 16:11)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

FRENKEL', S.Ya.; KUSHNER, V.P.

Analysis of factors affecting the sharpness of the helix-globule transition in globular proteins. Biokhimiia 28 no.3:535-539 My-Je '63.
(MIRA 17:2)

1. Institute of High-Molecular Compounds, and Institute of Cytology, Academy of Sciences of the U.S.S.R., Leningrad.

KUSHNER, V.P.

Physicochemical mechanisms of protein and polypeptide
denaturation in relation to the problem of paraneerosis.
Tsitologiia 5 no.4:379-390 J1-Ag '63. (MIRA 17:8)

1. Laboratoriya tsitologii zlokachestvennogo rosta Instituta
tsitologii AN SSSR, Leningrad.

KUSHNER, Viktor Pavlovich; OLENOV, Yu.M., doktor biol. nauk,
otv. red.

[Biopolymers] Biopolimery. Moskva, Nauka, 1965. 144 p.
(MIRA 18:7)

SILVER, W.F.; KHODOSOVA, I.S.

Effect of carcinogens and mutagens on nucleic acids. Report
No. 12 Effect of nitrosyl compounds on the structure
of the DNA from the rat liver. Tsitol. 7 no.3:101-105
May-Je '66. (MIRA 18:10)

1. Laboratoriya genetiki opukholyaykh kletok Institut tsitolo-
logii AN SSSR, Leningrad.

AKSENOVA, N.N.; VOROB'YEV, V.I.; KUSHNER, V.P.

Heat denaturation of the DNA from the liver and from liver
cancer in rats. Biokhimiia 29 no. 1:161-168 Ja-F '64.

(MIRA 18:12)

1. Institut tsitologii AN SSSR, Leningrad. Submitted July 8,
1963.

KUSHNER, V.V., aspirant

Change in the hemodynamic indexes of patients with chronic tonsillitis. Zdrav. Belor. 6 no. 10:32-34 0 '60.

(MIRA 13:10)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zaved'yushchiy - prof. I.D. Mishenin) Minskogo meditsinskogo instituta.
(TONSILS—DISEASES) (BLOOD—EXAMINATION)

L 22400-66 EMT(d)/EgP(i) IJP(c) BE/CS

ACC NR: AP6009904

SOURCE CODE: UR/0413/66/000/004/0104/0104

INVENTOR: Kushner, Yu. K.

ORG: none

TITLE: Device for direct carry. Class 42, No. 179089

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 104

TOPIC TAGS: shift register, computer component, computer switching

ABSTRACT: Each digit of the proposed device for direct carry utilizes two current switches. One set is controlled along the transistor bases by signals S_n and \bar{S}_n (see Fig. 1) and is connected in series through a resistor. Switches of the second

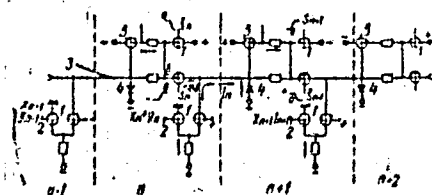


Fig. 1. Device for direct carry

- 1 - Current switches; 2 - control inputs;
- 3 - carry bus; 4 - clamping diodes;
- 5 - emitter followers.

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UDC: 681.142.07

i. 22400-56

ACC NR: AP6009904

set are connected to the carry bus, and each has a control input. To match current levels and improve operation, the switches of each digit utilize transistors of different conductivity, with the type of conductivity alternating from digit to digit. The control inputs of the second set are connected to OR or AND gates. In each digit a clamping diode and an emitter follower are connected to the carry. Orig. art. has: i figure. [DW]

. SUB CODE: 09/ SUBM DATE: 10Jun64/ ATD PRESS:

Card 2/2dda

KUSHNER, Z. Yu., Engineer

SHMS (_1943-)

"A High-Duty Boring Tool", Stanki I Instrument, 11, No. 9-10, 1943.

BR-52059019.

KUSHNER, Z. Yu.

USSR/Miscellaneous - Instruments

Card 1/1 : Pub. 103 - 6/29

Authors : Kushner, Z. Yu.

Title : Instrument with mechanism for transformation of longitudinal-spindle feeding into lateral-cutter feeding

Periodical : Stan. i instr. 9, 17-21, Sep 1954

Abstract : The development, by the Planning Office of the Ministry of Machine and Tool Construction Industry USSR, of an instrument with a mechanism capable of transforming the longitudinal-spindle feeding into lateral-(transverse) cutter feeding is announced. The mode of operation of this instrument and the technical advantages offered by it are described. Drawings.

Institution : Ministry of Machine and Tool Construction Industry, USSR

Submitted : ...

KUSHNIR, Z Yu

PHASE I BOOK EXPLOITATION SOV/5581

17

Moscow. Dom nauchno-tehnicheskoy propagandy.

Vysokoproduktivnyy rezhushchiy instrument [sbornik] (Highly Productive Cutting Tools; Collection of Articles) Moscow, Mashgiz, 1961. 354 p. Errata slip inserted. 10,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR. Moskovskiy dom nauchno-tehnicheskoy propagandy imeni F. E. Dzerzhinskogo.

Ed. (Title page): N. S. Degtyarenko, Candidate of Technical Sciences; Ed. of Publishing House: I. I. Lesnichenko; Tech. Ed.: Z. I. Chernova; Managing Ed. for Literature on Cold Treatment of Metals and Machine-Tool Making: V. V. Rzhavinskiy, Engineer.

PURPOSE : This collection of articles is intended for technical personnel of machine, instrument, and tool plants.

Card-1/6.

Highly Productive Cutting Tools (Cont.)

SOV/5581

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COVERAGE: The collection contains information on the following:
new brands of high-speed steels and hard alloys; designs of
built-up tools and tools for the machining of holes; tools
for machining heat-resisting and light-metal alloys and plastics;
tools for unit-head machines and automatic production lines;
and methods for the sharpening and maintenance of carbide-
tipped tools. No personalities are mentioned. There are 56
references, mostly Soviet. References accompany some of the
articles.

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Geller, Yu. A. [Doctor of Technical Sciences, Professor]. Highly
Productive High-Speed Steels

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Highly Productive Cutting Tools (Cont.)

SOV/5581

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LUNINER-SHIL'TIKOVA, A. I. Cand. Geograph Sci.

Dissertation: Vladimir Field-Janis (Econometrical-Geographical Characteristics." Moscow Oblast Pedagogical Inst. 20 Dec 54.

SO: Vechernyaya Moskva, Dec, 1954 (Project #17036)

KUSHNERENKO, K.N.; POPOV, A.G.; KOROTAYEV, G.V., gornyy inzh.

Development of the Lebedi open-pit mine. Gor.zhur. no.9:5-10
S '60. (MIRA 13:9)

1. Filial Instituta gornogo dela AN SSSR na Kurskoy magnitnoy
anomalii. 2. Nachal'nik Lebedinskogo rudoupravleniya
(for Kushnerenko). 3. Glavnyy inzhener rudoupravleniya Lebedinskogo
(for Popov).
(Lebedi (Belgorod Province)--Mining engineering)
(Kursk Magnetic Anomaly)

L 56895-65 EWP(k)/EWA(c)/EWT(m)/EWP(b)/EWA(d)/EWP(t) PF-4 JD/HM

ACCESSION NR: AP5018991

UR/0286/65/000/012/0012/0012
621.984.2.002.54

AUTHOR: Golovinov, M. F.; Kushnerenko, S. A.

TITLE: A tool for continuous metal extrusion. / Class 7, No. 171841

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 12

TOPIC TAGS: metal extrusion, metal forming

ABSTRACT: This Author's Certificate introduces: 1. A tool for continuous metal extrusion. The device consists of a container with a working sleeve and a die fastened in a holder. A high quality product is obtained by forcing out the air in a direction perpendicular to the axis of extrusion. An additional container is mounted between the end of the main container and the die face. The length of the cavity in this extra container is equal to the length of the press scrap, while the sleeve is an extension of the working sleeve in the main container. 2. A modification of this device in which the cavity for the press scrap is made in the dieholder between the die and the end of the holder touching the container.

ASSOCIATION: none

Card 1/3

L 58895-65

ACCESSION NR: AP5018991

SUBMITTED: 22Feb64 .

ENCL: 01

SUB CODE: IE, MM

NO REF SOV: 000

OTHER: 000

Card 2/3

L 58895-65

ACCESSION NR: AP5018991

ENCLOSURE: 01

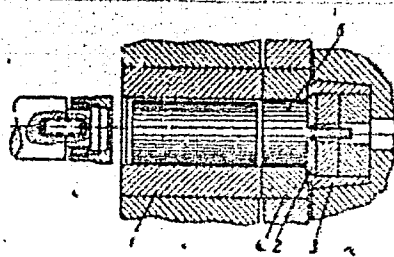


Fig. 1--container; 2--die; 3--dieholder; 4--extra container; 5--press scrap

KC
Card 3/3

KUSHNEREV, A.M., dotsent

Calculating continuous through bridge spans. Trudy NIIZHT no.11;
146-204 '55. (MLRA 9:10)

(Girders) (Bridges)

KUSHNEREV, A.M.

YAKOBSON, K.K., doktor tekhn.nauk, prof.; KUSHNEREV, A.M., kand.tekhn.nauk

"Reinforced concrete bridges for motor vehicles" by N.I.Polivanov.

Reviewed by K.K.Iakobson, A.M.Kushnerev. Bet.i shel.-bet.

no.7:294-295 J1 '57.

(MIRA 10:11)

(Bridges, Concrete)

(Polivanov, N.I.)

ANTSIPEROVSKIY, V.S., inzh.; KUSHNEREV, A.M., kand.tekhn.nauk, dotsent

A 55-m. span made of precast prestressed concrete. Trudy NII ZHT
no.24:239-247 '61. (MIRA 16:5)
(Railroad bridges--Design and construction)
(Prestressed concrete construction)

ACCESSION NR: AT4012862

S/3069/63/000/000/0089/0098

AUTHOR: Kushnerev, D. H.

TITLE: Ceramic fluxes for automatic welding of alloy steel

SOURCE: Svarka spetsial'ny*kh metallov i splavov. Kiev, Izd-vo AN UkrSSR, 1963, 89-98

TOPIC TAGS: welding, automatic welding, flux, ceramic flux, steel alloy welding, alloy steel

ABSTRACT: The technical quality of alloy steel welding can generally be evaluated on the basis of the relative mechanical properties of the weld seam and the base metal. These properties depend, in turn, on the chemical composition and structure of the weld metal. Since the metal in the weld seam should also be an alloy, it is appropriate to use alloy electrode wire. However, oxidation during welding reduces the Al, Ti and Si content of the weld seam and thus changes the mechanical properties. Two ways of combating this are either to use electrodes with higher alloy content than the base metal, or to weld automatically under a non-melting ceramic flux which prevents oxidation and also reduces the tendency to hot cracking by reducing the H₂ content in the weld seam; the latter is especially true if carbonates and the higher oxides of Mn and Fe are used as

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ACCESSION NR: AT4012862

fluxes. The structure of the weld metal can also be improved by modification with Ti, Al, Ca or other such elements; these may be introduced in various ways, but addition via the flux is better than addition via the electrode wire due to the different temperature at the time of incorporation. The physical and chemical properties of various fluxes are reviewed, and examples are given of the mechanical properties of weld seams of 25KhGFA, 30KhGSNA and 12N3 steel under the corresponding fluxes using a standard low-C electrode wire. Although such wire is usually satisfactory, the welding of austenitic Cr-Ni steels such as 1Kh18N9T can better be done with Sv1Kh18N9T wire under a K-8 flux ($\text{CaO-MgO-TiO}_2\text{-Al}_2\text{O}_3\text{-CaF}_2$). The mechanical properties of such a weld seam were found to be satisfactory. At present, ceramic fluxes are usually prepared at the site, but centralized production of such fluxes is being set up in the Dnepropetrovsk and Kuibyshev districts. Orig. art. has: 2 figures and 5 tables.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 13Feb64

ENCL: 00

SUB CODE: MM

NO REF SOV: 002

OTHER: 000

Card 2/2

KUSHNEREV, D. M.

USSR/Engineering - Welding Fluxes, Double

May 50

"Automatic Arc Welding Under Double Flux," K. K. Khrenov, D. M. Kushnerev, 3½ pp

"Avtogen Delo" No 5

Develops new method for arc welding using flux consisting of two parts: active layer melted in welding process and passive layer which remains in solid state and creates static pressure on bath of liquid metal. Method gives possibility of alloying metal in welded seam at expense of flux without application of expensive special electrode rods and permits welding of steel with rusted surface. Describes fluxes which are practically unaffected by rust of base metal.

PA 160T21

USSR/Engineering - Welding, Fluxes Jun 51

"Ceramic Unfused Fluxes for Automatic Welding," K. K. Khrenov, Mem, Acad Sci Ukrainian SSR, D. M. Kushnerev, Engr

"Avtogen Delo" No 6, pp 1-4

Suggests granulated fluxes which may include powders of metals and ferroalloys for alloying metal of weld. Each grain of flux contains all components in proper ratio. Flux components after mixing in dry state are converted into a paste with water glass. Granulated product is obtained either by

200T32

USSR/Engineering - Welding, Fluxes Jun 51
(Contd)

briquetting, drying and crushing or by direct drying of paste. Ceramic fluxes may be used successfully for welding steels of low quality, those with surface rust and high-alloy steels.

200T32

KUSHNEREV, D.M.

127
J Automatic Electric Arc Welding Under Double Layer of Flux. K. K. Khrenov and D. M. Kuchnerov (*SchweiBtechnik* (Berlin), 1952, 2, (1), 15-17).—A cross-section of an arc weld shows base metal, weld metal, fused flux, sintered flux, and unaltered flux. It is suggested that welding should be done with an uncoated electrode, 2 types of flux being applied separately by means of a simple box and pipe apparatus. A little "active" flux is applied to the base metal, being immediately covered by a larger amount of "passive" material, which remains almost entirely unmelted and simply protects the more fusible material beneath. Recommendations are made on material, grain-size, and prep. of fluxes, and the improvement in weld strength accompanying the two-flux method is illustrated by tabulated results of tests on welds in steel.—P. R.

KHRENOV, K.K.; KUSHNEREV, D.M.; AFONINA, G., redaktor; VUYMK, M.,
tekhredaktor.

[Ceramic fluxes for automatic arc welding] Keramicheskie flusy
dlia avtomaticheskoi dugovoi svarki. Kiev, Gos.izd-vo tekhn.
lit-ry, USSR, 1954. 106 p. (MLRA 8:9)
(Electric welding)

KUSHNEREV, D. M.

KUSHNEREV, D. M.: "The development and testing of ceramic fluxes for automatic welding". Kiev, 1955. Min Higher Education Ukrainian SSR, Kiev Order of Lenin Polytechnic Inst. (Dissertation for Degree of Candidate of Science of Technical Sciences)

SO: Knizhnaya Letopis', No. 41, 8 Oct 55

Kushnerev, D.M.

USSR .

13510* Ceramic Fluxes for Automatic Arc Welding. Kermicheskie slazy dlia avtomaticheskoi dugovoi svari, (Russian.) K. K. Klurenov and D. M. Kushnerev. *Svarochino* Proizvodstvo, 1955, no. 7, July, p. 13-16. Effect of fluxes on strength, hardness, and micro-structure, of base metal and surface. Micrographs, photographs, tables, 7 ref.

M J

KUSHNEREV, D.M.

21-5-18/26

AUTHORS: Khrenov, K.K., Member of the AN Ukrainian SSR, and Kushnerev
(Kushner'ov), D.M.

TITLE: A Machine for Granulating Ceramic Flux (Mashina dlya granu-
lirovaniya keramicheskogo flyusa)

PERIODICAL: Dopovidi Akademii Nauk Ukrain's'koi RSR, 1957, Nr 5, pp. 499-
501 (USSR)

ABSTRACT: The authors describe a new machine, "МГКФ -4," designed by
them for granulating ceramic fluxes for automatic arc welding.
The capacity of this machine is about 200 kg of fluxes per
hour. Its dimensions are: height - 1,300 mm; width - 570 mm;
length - 1,420 mm. Its weight is 150 kg. It is driven by a
0.5-kW electric motor. The machine is reliable and simple to
operate.
The article contains 1 figure, 2 photos and 2 Slavic refer-
ences.

ASSOCIATION: Institute of Electrical Engineering of the AN Ukrainian SSR
(Instytut elektrotekhniky AN URSR)

SUBMITTED: 12 February 1957

AVAILABLE: Library of Congress

Card 1/1

KUSHNEREV, D.M.

135-9-1/24

AUTHOR: Kushnerev, D.M., Candidate of Technical Sciences

TITLE: Compositions of New Ceramic Fluxes on Lime-Magnesium Basis
(Novyye sostavy keramicheskikh flyusov na izvestkovo-magne-
zjal'noy osnove)

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 9, p 1-4 (USSR)

ABSTRACT: The experiments described were carried out with the purpose
of finding an abundant and inexpensive replacement for tita-
nium dioxide in the previously developed (1), (2) ceramic
flux "KC-1" (containing 15% of TiO_2) as well as to improve
the formation of weld beads which was not completely satis-
factory with this flux. By experiments - which are described
in detail - the optimum composition was found which results
in a de-sulfurized weld metal with a finer structure. Flux
"KC-2", which is based on $CaO-MgO-CaF_2-SiO_2$, contains tita-
nium in quantities of 0.9 to 1.1% - and is suited for auto-
matic welding of low-carbon steel. Flux "KC-2" can be
utilized as a basis for special ceramic fluxes for welding
low-carbon and alloy steel. Such new grades are: "KC-4"

Card 1/2 which gives high-strength weld seams of low-carbon steel at

135-9-1/24

Compositions of New Ceramic Fluxes on Lime-Magnesium Basis

low temperatures, and "KC-7" for welding quenched alloy steel with high carbon content. It is stated that the standard molten fluxes used with wire "CB-08" or "CB-08A" for welding containers and pipe lines exposed to low temperatures do not always provide the required strength at low temperatures, and it seems to be important (10) to obtain satisfactory impact resistance of low-carbon steel at -60° to -70°C . It was found that a 1.2% increase of the Mg concentration in weld metal reduces the cold brittleness-threshold to -60°C , whereby the optimum (in respect of cold brittleness) combined titanium and aluminum addition is reduced to 0.8 - 1.1 and 1.6 - 2.1% respectively. Chemical compositions of all fluxes concerned, chemical compositions and properties of the resulting weld metal are given in the article.

There are 3 diagrams, 4 tables, and 2 photographs plus 10 references (all Russian)

ASSOCIATION: Institute of Electrical Engineering, Ukrainian Academy of Sciences (Institut elektrotehniki AN Ukr SSR)

AVAILABLE: Library of Congress
Card 2/2

KUSHNEREVID. 17.

135-9-12/24

AUTHORS: Khrenov, K.K., Member of the Academy of Sciences, Ukrainian SSR, and Kushnerev, D.M., Candidate of Technical Sciences

TITLE: A Mechanical Method of Granulating Ceramic Fluxes (Mekhanizirovannyi sposob granulirovaniya keramicheskikh flyusov)

PERIODICAL: "Svarochnoye Proizvodstvo", 1957, # 9, p 29-30 (USSR)

ABSTRACT: The article illustrates and gives operating information on machine "МГКФ -4" for granulating undried ceramic flux mass. This machine has a capacity of 200 kg/hr and consists basically of a rotating horizontal steel disk with tapered apertures, and resilient steel blades which are intermittently pressed down to the rotating disk. The soft flux mass which is fed unto the disk is, in this way, periodically pressed through the apertures in the disk, and the sharp upper edges of apertures cut off uniform pieces. The mass does neither liquify - as it did in other experimental methods of granulating - nor get unduly dense or warm, for the pressure is applied for only a short time and raised again to press the next lot. The cutting edges of apertures are being continually sharpened with the progressing wear of the disk. It is stated that

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A Mechanical Method of Granulating Ceramic Fluxes

135-9-12/24

up to now granulating of ceramic fluxes used for arc welding of special alloy steel constituted a bottleneck in the production of such fluxes. The described machine has already been tested. Additional information on it may be obtained at the Academy of Sciences, Ukrainian SSR, Kiyev. Engineer L.S.Zver'kov is mentioned in connection with design work on the machine. The article contains 1 sketch and 2 photographs.

AVAILABLE: Library of Congress

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SOV/125-58-12-6/13

AUTHORS: Khrenov, K.K., Gapchenko, M.N. and Kushnerev, D.M.

TITLE: The Automatic Welding of Cold-Resistant Steel Under a Ceramic Flux (Avtomaticheskaya svarka khladestoykoy stali pod keramicheskim flyusom)

PERIODICAL: Avtomaticheskaya svarka, 1958, Nr 12, pp 50-56 (USSR)

ABSTRACT: Information is given on the results of experiments carried out to determine the composition of a ceramic flux, the welding technology and the heat treatment ensuring satisfactory tightness and cold resistance of weld joints in "12N3" grade steel. It was stated that a satisfactory toughness of welds in a temperature of -160°C was obtained with the use of a "SV-08A" electrode (0.06% C, 0.36% Mn, 0.02% Si, 0.029% S, 0.015% P). A series of fluxes were tested, and the best results were obtained with the use of "KS-12N3" flux of the following composition: 52.9% marble, 20% fluorite, 15.0% titanium dioxide, 6.0% ferrotitanium, 0.8 ferromanganese, 1.2% ferrosilicon, 4.0% metallic nickel, 17 - 20% sodium silicate solution of 1.3 - 2.2% density. The required cold resistance of weld joints was ensured by a special heat treatment (hardening or normalization with subsequent tempering).

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SOV/125-58-12-6/13

The Automatic Welding of Cold-Resistant Steel Under a Ceramic Flux

Normalization by local heating is recommended for industrial use.

There are 4 sets of microphotos, 1 graph, 2 tables and 9 Soviet references.

ASSOCIATION: Kiyevskiy politekhnicheskii institut (Kiyev Polytechnical Institute)

SUBMITTED: July 12, 1958

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18(5,7)

AUTHOR:

Kushnerev, D.M., Candidate of Technical Sciences

SOV/135-59-8-3/24

TITLE:

Some Features of Gas-Phase Processes During Submerged-Arc Welding With Agglomerated Flux

PERIODICAL:

Svarochnoye proizvodstvo, 1959, Nr 8, pp 8-11 (USSR)

ABSTRACT:

In the metallurgic welding processes with a flux the reactions in the gas-phase and especially the processes which influence the dissolution of the hydrogen in the molten metal are of utmost importance. In many investigations attention is given to the fact that hydrogen influences the formation of pores during the welding. It also increases the tendency of the welded joints to form cracks in the seam zone and the seam in welding of hardened steels. It lowers the decay temperature of the authenite which increases the structural tension. The greatest probability for the dissolution of the hydrogen in the molten metal is given, if metal drops are transferred from the electrode on the work piece. The degree of absorption of the hydrogen by the drops of the metal is determined largely

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SOV/135-59-8-3/24

Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

by the partial pressure of the hydrogen in the gas phase. It is commonly believed that the hydrogen must be combined in combinations which are resistant to high temperatures and do not dissociate in the metal, like fluoride of hydrogen and hydroxyl, if the partial pressure of the hydrogen in the gas phase shall be lowered. The intensity, with which the hydrogen is combined in such compounds which resist the heat of the arc, is usually estimated by the value of the free energy in the formation reaction of these compounds. Figure 1 contains calculation data for the free energy of the most probable reactions in the formation of HF and OH, which take place according to the relative temperature during the welding with a flux. As a result of these calculations it was found, that the combination of the hydrogen with the fluoride of hydrogen, mainly according to the formula $\text{SiF}_4 + 3 \text{H} = \text{SiF} + 3\text{HF}$, is of decisive importance in lowering the partial pressure of the hydrogen in the gas phase. For this

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SOV/135-59-8-3/24

Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

reason a great amount of CaF_2 and SiO_2 is usually added to the flux. It must be said in this connection, that the possibilities to lower the hydrogen percentage in this way using fluxes have already been to a large degree exhausted. The formation reactions between hydrogen and oxygen usually play only an unimportant role. It is very difficult to create conditions for a intensive oxydation in the gas phase and a subsequent deoxidation of the tub for the fluxes. This difficulty does not exist for agglomerated fluxes. It has long been noticed, that the agglomerated fluxes, which are composed of the oxides of iron and manganese with about the same percentage of CaF_2 , surpass the other fluxes in regard to their resistance to the formation of pores. The same advantage over the common fluxes have agglomerated fluxes, which are composed on the basis of bicarbonate of calcium. It is suggested, that the hollows on the nuclei of the agglomerated fluxes serve as germs for the separation of SiF_4 during

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SOV/135-59-8-3/24

Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

the heating of the flux to a high temperature. It is, however, difficult to take this for the only explanation of the high resistance of the seams to form pores during the welding with a flux. Experiences show that in other compositions agglomerated fluxes do not prevent a formation of pores in the welding seams. All this leaves it to guess that in welding with agglomerated fluxes there is still another possibility to lower the partial pressure of the hydrogen in the gas phase by admitting oxygen and other gases, which are separated from the flux during the welding, into the zone of the electric arc. To find out if this guess was true the author tried to compare by calculations the role which oxygen and fluorite play in lowering the partial pressure of the hydrogen in the gas phase during welding with flux. This task lead to a determination of the composition of the gases in the arc hollow in comparison to the composition of the flux. The theoretical analysis of the composition of the

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Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

SOV/135-59-8-3/24

gases in the arc was made easier by the fact, that the gases, metal vapors, and the slag, which is found in the arc during the welding, are probably in a thermodynamical equilibrium inside the arc column, and secondly by the fact, that the processes pass at constant volume and pressure in the gas phase. In the found working value of the welding in the time unit certain quantities of reacting materials are found, which can be approximately calculated. If the original concentration of the reacting materials are known, if these are replaced by the partial pressures of the gases and vapors, and if the known thermo-technical constants are used, the partial pressures which are equivalent to the given temperature can be calculated. Thus it is possible to determine the partial pressure of the hydrogen according to the original concentration of the fluoride and oxygen. The premises of the calculation are given. The data which were calculated by considering the actual concentration of the reacting

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30V/135-59-8-3/24

Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

materials during the welding with agglomerated fluxes and which are given in figures 2 and 3, show that the influence of the oxygen in comparison to that of the fluorite in lowering the partial pressure of the hydrogen in the column of the arc is sufficiently important. It was found in an analogue computation, that theoretically the partial pressure of the hydrogen in the arc can be reduced to a very small value, if the flux contains about 50% CaF_2 and about the same percentage of SiO_2 . The different compositions of the flux was calculated. The author comes to the following conclusions: the agglomerated fluxes on the basis of marble which are produced in the normal technology guarantee a considerably lower percentage of hydrogen in the molten metal than fluxes of about the same composition, which were produced at a temperature of 700° . The agglomerated flux K-11 guarantees seams in welding low-carbon steel which resist heavy conditions of corrosion and wetting of the metals with-

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SOV/135-59-8-3/24
Some Features of Gas-Phase Processes During Submerged-Arc Welding
With Agglomerated Flux

out a previous cleaning of the edges which are welded.
At the end the author gives his thanks for useful
hints to Candidate of Technical Sciences,
Docent V.I. Dyatlov. There are 3 tables, 6 graphs
and 19 references, 17 of which are Soviet and 2 Eng-
lish.

ASSOCIATION: Institut elektrotekhniki AN USSR (Institute for Elec-
trotechnics of the Academy of Sciences of the UkrSSR)

Card 7/7

25(1)
AUTHOR: Kushnerev, D.M., Candidate of Technical Sciences SOV/125-12-4-6/18

TITLE: On the Stability of Welds Against Pore-Formation Causing Rust at Weldings Under a Ceramic Fusing-Agent

PERIODICAL: Avtomaticheskaya svarka, 1959, Vol 12, Nr 4, pp 47-54 (USSR)

ABSTRACT: The article presents the calculation of the combination of the gases in the arc-stream at welding under a ceramic fusing agent, with a calculation of the concentration of the reacting substances. It is shown which part oxygen and fluorine take, to reach a partial hydrogen-pressure in the gas-phase. It was taken for granted that the temperature in the arc-stream was changing from 4,000 K to 8,000 K. The welding is being performed under a fusing agent, containing MnO_2 , CaF_2 , SiO_2 and $FeSi$. All CaF_2 reacts with SiO_2 and $FeSi$ and develops SiF_4 . All SiF_4 gets into the zone of the arc. At calcination of the fusing agent at a

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SOV/125-12-4-6/18

On the Stability of Welds Against Pore-Formation Causing Rust at Weldings Under a Ceramic Fusing-Agent

temperature of 650° all MnO_2 turns to Mn_2O_3 within 1.5 hours [Ref 11]. During the welding process the Mn_2O_3 turns to manganese oxide. All the oxygen, which was developed by the thermic dissociation of the Mn_2O_3 ($Mn_2O_3 = 2 MnO + 1/2 O_2$) enters the arc zone. The reaction energy without calculation of the concentration of all substances participating in the reaction has proved not to be a criterium for estimating the influence, of the components of a ceramic fusing agent, on reaching partial hydrogen-pressure in the gas-phase. The calculation showed, that it is possible to reach a partial hydrogen-pressure, which is sufficient for the oxygen in the fusing agent, by welding with ceramic fusing agent together with oxygen and fluorine. The ceramic fusing agent type K 11

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SOV/125-59-4-6/18
On the Stability of Welds Against Pore-Formation Causing Rust at
Weldings Under a Ceramic Fusing-Agent

guarantees tight welds at the welding of small carbonized metals. The author mentions works of the Candidate of Technical Sciences V.I. Dyatlov. There are 2 tables, 5 graphs and 13 references, 12 of which are Soviet and 1 American.

ASSOCIATION: Institut elektrotekhniki AN USSR (Institute of Electrical Engineering of the AS UkrSSR)

SUBMITTED: September 6, 1958

Card 3/3